GREAT ENTERPRISES IN WHICH NEW

A Visit to the Region in which Gold was First Discovered in America—Ore in Apparently Immense Quantities Worked at a Profit Varying from \$1 to \$5 a Ton-Why it is Relieved that Handsome Fortunes are to be Made by the New Method of Mining. DAHLONEGA, Ga., Nov. 25 .- On the evening Friday, Nov. 8, a party of gentlemen, inter-sted directly or indirectly in the development the Pennsylvania Railroad Company. In the party were included several prominent mem-pers of the New York Stock and New York Mining Exchanges. The object of the meeting was to undertake a trip to the gold belt of northeastern Georgia for the purpose of ascertaining, by ern Georgia for the grant of the enterprises to which several of the number had lent their names, and to which the majority eally deserving of the credit to which, on heareen induced to give the endorsement of their names, and in which they had invested consid-

the house of that name, one of the most respected on the New York Stock and the New York Mining Exchanges: Mr. E. S. Munroe, tormerly a member of the firm of Lockwood & one of the most, if not the most trust-

the Georgia gold belt had lately been red under organizations of this State or its of working capital for the devel-the mines, and the further fact that it s properties to follow the example owing points of vital importance for the

for the development of the mines

rd-That for the same reason labor d and unskilled, is very much cheaper han in any other gold mining section of the

fithin the compass of any moderately valuable reports, the gold can be worked at a consider-

ost than anywhere else in the country. The principal gold region of Georgia is belt from four to ten miles wide, sing northeast and southwest, parallel with Ridge Mountains, and extending Habersham, White, and Lumpkin and beyond them into Alabama, Blue Ridge, the foothills, and the e away. The section embracing this and solver solvers of age, in the bed of a men his father's farm in Cabarrus County, in Carolina. It was about the size of a smoothing from and was kept for several in the house to hold the door open, and sold to a silversmith for \$3.50. In the stream many pieces of gold were after-found at intervals of several years, the steing the twenty-eight pound lump so endy cited. In 1829 the placers were as in Burke and MeDowell Counties, in the State, and from these mines the gold was desouthwestward into Georgia, where it first discovered on Duke's Creek, in Haberthow White County, in part, in the same the fluit fragment found weighed three and MeDowell Counties who is the weight of discovery in the order of the county with the size of North Carolina who is the weight of the county in the county with the size of North Carolina who is the size of North Reed, a boy 12 years of age, in the bed of a

COLD MINES OF GEORGIA

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YORK CAPITAL IS INVESIED.

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HLONDGA Ga, Nov. 25.—On the evening
diay, Nov. 8, a party of gentlemen, interdirectly or indirectly in the development
in mines in northeastern Georgia, met by
intuent at 9 P. M. in the waiting room of
bemisplania Halfroad Company. In the
were included several prominent memof the New York Stock and New York MinRechanges. The object of the meeting was
derinke a trip to the gold belt of northeastBeorgia for the purpose of ascertaining, by
mail inspection and investigation, whether
enterprises to which several of the number
that their names, and to which the majority
subscribed and paid their money, were
y deserving of the credit to which, on hear
and printed reports, these gentlemen had
induced to give the endorsement of their
s, and in which they had invested considde sums,
eparty included Mr. H. A. Boody, head of
shouse of that name, one of the most reried on the New York Stock and the New
Mining Exchanges: Mr. E. S. Munroe,
aerys a member of the firm of Mesers,
& A Francie, members of both Boards; Col.
B. Price, formerly Manager, and to-day
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From the best data that can be obtained it has been stated that from the year 1829 to 1839 the yield of the mines was 15,000,000 pennyweights, or \$16,000,000. For the next ten years probably not more than 4,000,000 penny-weights were taken out, owing to the decrease of the mining carried on in these placers. The statistics of the mint do not exhibit the true amount taken out, because a very large proportion of the gold taken out was sent off, as found, into Kentucky and Tennessee in exchange for stock, tools, and provisions.

The gold found in this section is of extraordinary fineness, and it is the universal testimony of those who have worked in the placers
of Georgia that the gold is generally in larger
lumps and particles, or is conrect than in the
placers of the western parts of North Carolina.
The writer saw in the possession of Col. Hand
a small box full of specimens of pure gold,
mostly without a particle of quartz, all,
or almost all, having the appearance of being
rounded off by the action of water, weighing
from half an ounce to five or six ounces each—
all picked within recent date in the immediate
vicinity of Dahlonega. Prof. Blake, in a report
made to one of the companies working there,
remarks on the subject of the quality of the
gold: The quality of the gold is excellent,
rarely yielding less than ninety per cent, or
900 parts in 1,000, the difference being silver.
The standard of gold of the United States consists of 900 parts of gold to 100 of alloy." The
annexed table gives the averages of a great number of assays of the gold from the principal
Georgia mines: The gold found in this section is of extra-

company, having had until lately no permanent facility for putting water on the summit, which is necessary in order to properly work it. This facility is now furnished from a reservoir supplied by a pump in a steam mill. It gives evidence of great richness," Capt. W. R. Crisson, at present managing the mine, and who is a practical miner of many years' experience, both in California and Georgia, reports the yield from tests made by him at from \$2 to \$20 per ton. Five samples, taken from different parts across the vein, and lately assayed by Messrs. Booth and Garrett of the Philadelphia Mint, averaged \$25.60 per ton in gold. Other samples from the same vein, nearer the top, assayed in Cleveland, Ohio, run about \$19 per ton in gold.

It is usually estimated that the ordinary mill process will save two-thirds of the assay value of "free gold" ores. On this basis, the ore from this vein should yield about \$15 per ton: but if, in practice, it should only yield \$5 per ton, the working value of the vein is simply enormous. Taking the croppings of the vein at 1,320 feet across the property, with about 800 feet of its dip above water level, and an average thickness of 20 feet, and allowing 25 cubic feet to the ton, we have about \$45.000 tons of the ore on this sand vein alone above the water line of the river.

thickness of 20 feet, and allowing 25 cubic feet to the ton, we have about 845,000 tons of the ore on this sand vein alone above the water line of the river.

Besides the above a regular quartz lead runs through the property, with from three to four feet of good paying ore; and running through and with this lead is a pay streak which alternately hugs the hanging-wall and the foot-rock, averaging from three to eight inches in thickness, which is enormously rich. This quartz lead is in reality the original discovery of the Findley Mine, and from it it derives its name. It was discovered by a Cherokee Indian named Duncan some years before the war, and Mr. Findley paid Duncan \$500 for the discovery. Out of this vein, which was followed by Findley and his partner. Gen. Riley, 160 feet in its course, in a southeasterly trend and to a perpendicular depth of 120 feet, it was proved in court that over \$90,000 had been taken. The case came into court in consequence of disputes between Findley and his associate—the two were merely lessees of the property on royalty—and the owners of the mine. The result of the litigation was to enable the owners, who believed that they were not receiving royalty on the real amount taken out, to place Capt. John Huff in charge to superintend the working of the mine. Capt. Huff told the writer that in working only ten feet of this lead there had been taken out or to the value of \$3,900, besides many valuable nuggets which were saved for specimens.

Within a year, as much as \$600 has been taken out of a single foot of this vein. A small tunnel, some 500 feet long, has lately been run from a point on the mountain side 360 feet above its base, for the purpose of draining the old slope of this vein, and to ascertain the condition and value of the vein. By this means the bottom of the old works was struck, the water drained off, a free circulation of air secured, and the vein found as rich as ever at the point where it had been abandoned. While the party was on a visit to this tunnel, they obtai

method of minno.

Water is supplied to the Findley Mine by the Hand Gold Mining Company, of whose hydraulie works mention has already been made. The Hand Company built for the Findley Company an extension of two and a half miles in length, from its main ditch, and by this means water is carried to a reservoir on the mountain side 340 feet above the old water mill. Besides this the Findley Company has extended another ditch to a new ten-stamp steam mill which it has just erected on the north stde of the hill. This mill is furnished with a steam pump, by means of which water is driven through an iron pipe into a reservoir on the very crest of the hill.

The rock, which, as previously stated, consists principally of decomposed quartz, is separated from the main body in open cuts on the hillside, and with sledge hammers broken up into fragments varying in size from that of a man's list to double or treble that size. The cuts from which these rocks are separated are carefully made wider at the top, narrowing to a small channel at the bottom. They just represent, along the hillside, the space covered by the letter V, lying at an angle varying from 45° to 75° along the slope of the hill, with the deepest part of the cut extending through the centre of the area thus described. From the bottom angle of the figure V, a narrow cut on the face of the hill, say from two to three feet wide, and varying, according to the slope of the hill, from a perpendicular depth of from ten to forty or flity feet into the hill, forms the channel through which, when the water is let on from the reservoir at the top of the hill, the ore is driven on to the floor of the mill at the base of the mountain. By this method a mass of ore, say from seventy-five to one hundred tons, is "flooded" to the mill within ten minutes from the time when the water is turned on from above. It is this great economy—rendering hauling of ores unnecessary—which forms one of the main elements of the value of all the mines in this section of country.

When Prof. Cla annexed table gives the averages of a great number of assays of the gold from the principal Georgia mines:

Auraria, Lumpkin County, vein and placer
Dablionega, Lumpkin County, vein and placer
Lewis Mine, Lumpkin County, vein and placer
Septial county of the county of the county of the letter V, lying at an angle varying from the lett

the process of flooding ores to the mills, by which Col. Hand said that a body of fifty or a hundred tons of ore could be taken from a cut in the hillside and deposited on the floor of the mill within not more than ten minutes. The professor was incredulous, but too polite to say so. "Weil," said Col. Hand, "I hardly existence the color of the mill within not more than ten minutes. The professor was incredulous, but too polite to say so. "Weil," said Col. Hand, "I hardly existence the color of the will ride around to the mill at 6 o'clock, and then you can see for yourself."

At 6 P. M. they stood on the banks of the Yohoola River, Mr. King, with watch in hand, opposite the cut in the hill. Col. Hand had given the foreman of the cut instructions to signal, by hoisting a white handkerchief, the moment heopened the sluice gates of the reservoir letting the water into the cut. Up went the signal, and a few seconds afterward there was seen a mass of earth, rocks, quartz, and water rushing through this gash on the hill side. In five minutes and a half every loose particle of everything in the cut was deposited on the mill floor. The mass of ore and other material that had been washed out of the cut and conveyed to the mill was over sixty tons, and the professor was converted.

The crushing and milling power on this property consists of two mills, one a good 24-stamp mill, worked by a 36-inch turbine wheel, run by the water power of the Vahooda River, each stamp of 750 pounds; the other mill is a new 10-stamp steam mill, just erected, at a cost, including the extense of the extension of the ditch to it, with engine, boiler, pump, batteries, and everything complete, of \$4,500.

COST OF MINING AND PROFITS.

The writer was poiltely allowed by Col. Hand, who is part owner and present General Super-

NEW YORK, SUNDAY, DECEMBER 1, 1878.

preper for sulphurets has been done on this vein, but a few tons which were passed through the mill for "free" gold yielded over \$5 per ton. The ore is flooded to the mill by water in a canal brought from the Hand Mine.

The ten-stamp mill was put up to prospect and develop the mine. The quantity of good pay ore contained in five or six different cuts which have been opened up for prospecting is proved to be very heavy. It is "he intention of the owners soon to put "p a forty or fifty-stamp mill for the work" ng of the free gold ores.

This mine is the property of the Hand Gold Mining Company of Georgia, which owns between thirty and forty forty-acre lots, in all some 1.880 acres, situated part on the banks, but all adjacent to the Yahoola River, and contiguous to the lands of the Benning Mine, on the south. On the property is a mill worked by water power from the Yahoola. through a turbine wheel. The mill runs only twenty stamps, but there is power enough now to run forty or fifty stamps. The ore is, as in the Hand and Findley Mines, flooded to the mill by water power. When the writer visited this mill a quantity of refuse material, mainly alluvial deposit from the surface of the hill, was being carried on to the mill floor with the ore, and from investigation of the books, as well as from personal examination of the matter carried down, I am inclined to believe that out of every seventy-five tons flooded down at each drift, not over twenty-five tons could properly be classified as pay ore.

Of the real value of the ore on the property, little positive information could be obtained. The writer was informed that Prof. Newberry of the Columbia School of Mines had assaved ore sent to him from these veins, and that he had extracted gold from it at the rate of \$272 per ton. Of all the land owned by this company, and through the whole mass and along the entire surface of which, gold is permeated, only a small section of one lot. No. 1,030, is being worked. The proprietors are now building a 20-stamp mill on lot No. 1,032, and intend shortly to add ten more stamps to their old mill, which will give the property a total crushing power of fifty stamps. There is a considerable quantity of ore on this property which would yield over \$100 per ton, and which, with the water power owned by the company, should be worked very economically.

New york Mine. THE HAND MINE.

Company, and now known as the Pigeon Roost property.

On the property is one water-power mill, with an undershot wheel, running nine (9) stamps.

The ore is a micaceous gold-bearing slate, with yeips of decomposed quartz running through 9. Of these yeins, one is said to be particularly rich, carrying coarse gold.

Lot 793 controls the water power of Cane Creek, with which the grand Barlow mill is to be run. The extension of the main ditch of the Hand Company to the Pigeon Roost section materially enhances the value of this property, as it will enable Mossrs, Huff & Roberts to flood their ores from the hillside on to the floor of their mill.

CINCINNATI MINE.

CINCINNATI MINE.

This property is owned by Mr. Williams of Cincinnati and Mr. Hungerford of Hackensack. N. J. It is located on the Pigeon Roost Belt, on lot No. 725 of forty acres. It has a steam mill running ten stamps. The ore, like all in this belt, is a rich micaceous gold-bearing slate, greatly decomposed, with quartz veins running through it. This mine has only lately been opened, and is not very far developed, but it is said to be yielding a very good return for its cost and working expenses.

THE DAVIS MINE.

THE DAVIS MINE.

during the last few years, and is now said to be doing very well. It has, like its neighbor, the Davis Mine, no facilities for flooding the ores by water to the mill, but when once supplied with them, is would undoubtedly pay a handsome interest on original cost and expenses of necessary improvements. The ore is of the same character as all running through this belt, a micaceous slate, very easily broken up, bearing free gold all through it, with quartz veins, of great richness and easily crushed, permeating the entire mass of slate.

THE BARLOW MINE.

Storm the course of everyl years, the course of course of the course of

gold throughout its entire mass, and of a breadth of from 100 to 400 feet across, running corner-wise through three forty-are loss inearly a mile in extent), Mr. King found dirt at a distance of every few yards, right across the whole width of the vein. In no single panful did he fail to find color.

Nothing can berhaps convey a more correct opinion of the probable enormous wealth contained in these hills about Dahlonega—and the Pigaon Roost beit is of the richest—than a remark of Prof. King, after he had examined this Pigoon Roost, the Findley, and other properties in the neighborhood. He said: If a hundred stamps each, were at work here for a hundred years, the deposit would be far from exhapsted. On this subject of the wealth contained in these hills. I will quote only one other authority. The Rev. W. P. Harrison. Chaplain to the United States House of Representatives, formerly of Atlanta, Ga., is a man of extraordinary menial gitts, master of twenty-seven languages, and an amateur mineralogist and geologist of no little repute. He recently stated to a friend of the writer that he had visited the Dahlonaga gold region and examined it exercully, making his own analyses upon the ground, and that, partly from calculated, and partly from general observation, he had can't partly from general observation, he and region of the flood flars worth of hundred million 1500,000,000 doing the blasting and leaven of the Pigeon Roost property. Shortly after becoming sole owner, and upon the report of the value of the property made to him by Professor King, he entered into the property of the flooding of ores to the mi

wood is abundant on all the hills, a steam mill

wood is abundant on all the hills, a steam mill occupies one or more hands in felling and hauling wood for fuel. Water power is cheaper, and attainable in almost every section of the gold belt.

The writer obtained, while in Dahlonega, from three experienced and practical superintendents of mines there, three estimates of working and milling the ores. The figures were taken from actual running experience of mills worked by these gontlemen. The gentlemen referred to are Mr. N. H. Hand, Superintendent of the Findley Mine, copartner with

with Mr. Barlow in the Pigeon Roost property, and owner of several other mines in actual operation; Mr. W. R. Crisson, now running the Findley Steam Mill, formerly owner of the mine in 1875; and the third, Col. W. B. Price of Cleveland, O., who also ran the Findley property for some eighteen months. In the three estimates furnished by these three gentlemen, are set down every possible expense incurred in the handling of the ore on the nill-side to its final delivery in a button from the crucible. For the sake of brevity, I will copy only one of these estimates, that of Col. Hand, and merely remark that the details of the other two are in all essential points identical.

Col. Hand says the cost of mining 100 tons of ore to supply a 50-stamp mill is as follows:

where the case of the first will will be compared to the compa

Blauger & Petrie, 110 Reade st., New York .- 4/n. | Bess, and bronchines, of Dra Darris, at West Soth at - 44m.

PRICE THREE CENTS.

MR. TILDEN'S INCOME TAX.

A DECISION IN NEW YORK AND THAT RENDERED IN MICHIGAN.

Allegations with Regard to Mr. Tilden's Connesei Fees-His Letter on the Currency in 1865 - Extensive Railrond Operations,

Judge Choate decided in favor of the Gov-Judge Choate decided in favor of the Government, yesterday, in the Tilden tax case, on a motion to open the packages of depositions taken at Chicago, Boston, and Marquette. These depositions contain averments that Mr. Tilden received large sums of money for which he was liable to pay an income tax, but which was not duly returned according to law. Mr. Tilden's lawyers fought stubbornly against opening the depositions, alleging, among other things, that they contained scandalous matter, which might be published to the injury of Mr. Tilden. The papers were opened and filed. Tilden. The papers were opened and filed.

In the Marquette deposition there is a letter from Mr. Tilden to William L. Wetmore, dated Oct. 5, 1865. Mr. Tilden said: "I cannot at this moment calculate with certainty the course of financial and political events. On the one hand, the public anticipation of the speedy clos-ing up of the war may create an indisposition to buy, except from hand to mouth, and the imagination of the people may fancy immediate peace and a return toward specie payments and the reduction of values to a gold standard. On the other hand, peace may not be so near as is hoped for. If it came it would take a long while to retract the present immense paper circulation, unless it should be increased. to explosion. The Government is now spending more and borrowing more every day than before. The next thirty or fifty days will develop important events concerning all business.
Within that time we shall know whether there is to be a further issue of legal tenders, which I deem probable. We shall need all your faculties to guide the business. shall need all your faculties to guide the business wisely. You must fully advise me about the N. Y., and keep me advised. We must judge as soon as possible whether it is best to divide the risk of the future by making sales of a part of our productions, even if we have to do so at fixed prices, provided we are able at the same time to fix the cost of producing it. It throw out these views that you may be considering the whole case and we may be both ready to act. Give me the prosent ideas which prevail as to the demand for ores in the spring. What do you say to buying, if we can, the Excelsion land?"

Mr. Wetmore testified in the Marquette depositions that Mr. Tilden had received large sums for his interest in the New York Iron Mine. The Government avers that Mr. Tilden asserts that the Government has no right to claim anything.

On the subject of Wetmore's testimory Mr.

Found Bend After Blowing Out the Gas.

Boston, Nov. 30,-W. H. Metealf, aged 50, and